

REMARKS

Claims 1-15 are pending in the application. Claims 1, 3, 5-8, 10, and 12-15 have been amended and claim 16 has been added, leaving claims 1-16 for consideration upon entry of the present Amendment. Applicant requests reconsideration in view of the amendment and remarks submitted herewith. As will be discussed in detail below, it is believed that the application is in condition for allowance.

The Examiner has objected to claim 5 under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 5 has been amended so that the limitation is clarified. Applicant respectfully requests that this objection be withdrawn.

Claims 1-15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. Applicant has amended the claims. In addition, the Examiner stated that, in claim 11, it is not clear what is meant by "in a non-positive manner." Non-positive manner means not form fit. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejections under 35 U.S.C. § 112, second paragraph.

Claims 1-3, 11, and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Snider et al. (US 3,669,599) ("Snider"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner asserts that Snider teaches a mold closing unit that includes a device 66, 74 mounted on the support element 16 and cooperating with a portion of the tie rod/guide elements 18 for variably fixing the spacing between the stationary mold carrier 14 and the movable mold carrier 20, a fixing device 116 on the movable mold carrier for fixing its position, and a two-part linear drive 22 to move the movable mold carrier toward and away from the stationary mold carrier. Applicant respectfully traverses.

Claim 1-3, 11, and 12 include the following limitations: "wherein when the fixing device is actuated and the device for variably fixing the spacing is out of operational connection, the drive alters the spacing by displacing the device for variably fixing the spacing along the portion of the guide elements, wherein one of the two parts of the drive extends as a linear movement means for the moveable mold carrier in a linear manner in the closing direction even during the closing movement." Snider does not teach or suggest using one drive for operating the injection process (moving the movable mold carrier) and for adjusting the mold height.

Snider teaches that when a new mold has to be operated on the machine, a mechanism for adjusting the initial or starting spacing is engaged, in that the sprockets 66 are driven by the chain 68, thereby rotating the nut members 54. See col. 8, lines 23-33 and col. 5, lines 3-22. Thus, Snider teaches using a chain drive for mold height adjustment, which is not the same drive that is used for mold closing and for moving the supporting element.

Moreover, there are blocking members 116 that are shaped to span the strain rods 18 and in blocking position are interposed between hollow member 86 and nut member 54. See Fig. 3 and col. 6, lines 42-59. The operation is described at col. 7, line 12 to col. 8, line 22. At the start of each and every injection cycle the blocking members 116 are open to allow mold closing. When traversing cylinder 22 has brought the mold halves in abutting position, the blocking members 116 are brought into their blocking position according to Fig. 8 and thereafter the clamping pressure is applied and pressurized plastic injected. See Col. 7, lines 44-62. When the injection operation is completed, the blocking members 116 are opened again, but this has to be done cycle-by-cycle. See col. 8, lines 5-22. Therefore, the blocking members 116 are used to clamp the movable mold carrier in every injection cycle, while the claimed invention uses a device for variably fixing the spacing between the stationary mold carrier and the movable mold carrier, but only when the mold height has to be adjusted to a new mold. Thus, there is no fixing device for fixing the movable mold carrier, so that the drive that is used to move the movable mold carrier in its closing position cannot be used in Snider to move the supporting member, i.e. back support 16.

Accordingly, Snider does not anticipate claims 1-3, 11, and 12. Applicant

respectfully requests that the Examiner withdraw the rejection.

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Grundmann (US 3,890,081). The Examiner notes that Grundmann has a two-part linear drive 47, 50 extending between the movable mold carrier 18 and the support element.

Claims 1-3 include the following limitations: "wherein when the fixing device is actuated and the device for variably fixing the spacing is out of operational connection, the drive alters the spacing by displacing the device for variably fixing the spacing along the portion of the guide elements, wherein one of the two parts of the drive extends as a linear movement means for the moveable mold carrier in a linear manner in the closing direction even during the closing movement." Grundmann does not teach or suggest using one drive for operating the injection process (moving the movable mold carrier) and for adjusting the mold height. Instead, Grundmann teaches that the drive only operates the injection mechanism. The mold height adjustment is made by initially backing the clamp housing 22 away from the moveable platen by driving chain 45.

For the operation of Grundmann, the traversing cylinder (with the blocking means according to Figs.4 to 7 disengaged) brings the mold halves in abutting and closing position. At the end of the traversing cylinder stroke, the blocking means are positioned at each guide bar 50, 52, so that the movable platen may not move toward the clamping housing 22. Pressure is then applied for injection molding. Since the blocking means function form-fit, the blocking means have to be positioned at the same position at each and every cycle; otherwise the machine would not work. As such, the blocking means have to be engaged in every cycle.

Accordingly, Grundmann does not anticipate claims 1-3. Applicant respectfully requests that the Examiner withdraw the rejection.

Claims 4, 6-10, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Snider. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A.

1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

As explained above, Snider does not teach or suggest all of the limitations of claim 1. Claims 4, 6-10, and 13 include all of the limitations of claim 1. Thus, for the reasons stated above, claims 4, 6-10, and 13 are patentable over Snider. Applicant respectfully requests that the Examiner withdraw the rejection.

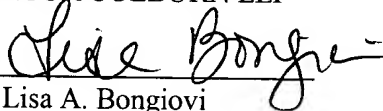
In addition, attached hereto is a marked-up version of the changes made to the application. The attached page is captioned "**Version with Markings to Show Changes Made.**"

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicant's attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: 

Lisa A. Bongiovi
Registration No. 48,933
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No. 23413

January 6, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claims 1, 3, 5-8, 10, and 12-15 in "marked up" format, as follows:

1. (Marked up/Twice Amended) Mold-closing unit for an injection molding machine for processing plastics materials and other plasticizable masses, having comprising:

a stationary mold carrier,

a moveable mold carrier which has between itself and the stationary mold carrier a mold tentering space to accommodate injection molds of variable height, measured in a closing direction,

a drive to move the moveable mold carrier in the closing direction towards the stationary mold carrier and away from the stationary mold carrier, which drive has at least two parts operationally connected to one another, of which one part is supported on a support element, and the other part is connected to the moveable mold carrier,

guide elements which guide the moveable mold carrier during its movement in the closing direction, having at least one portion,

a device for variably fixing the spacing between the stationary mold carrier and the moveable mold carrier measured with the injection mold closed and assuming a movement path of the moveable mold carrier unaltered in relation to a state before alteration of the spacing, which device enters operational connection with the portion of the guide elements to fix the spacing-set,

a fixing device allocated to the moveable mold carrier which, on actuation, fixes the moveable mold carrier in its respective position,

wherein ~~drive~~, when the fixing device is actuated and the device for variably fixing the spacing is out of operational connection, ~~itself~~ the drive alters the spacing by displacing the device for variably fixing the spacing along the portion of the guide elements,

wherein one of the two parts of the drive extends as a linear movement means for the moveable mold carrier in a linear manner in the closing direction even during the closing movement.

3. (Marked up/Twice Amended) Mold-closing unit according to claim 1, wherein

the drive is a hydraulic drive and ~~that~~ the parts of the drive are the cylinder and a piston rod of a hydraulic piston-cylinder unit.

5. (Marked up/ Twice Amended) Mold-closing unit according to claim 1, wherein ~~in connection with the drive the spacing is variable by alternate actuation of the device for variably fixing the spacing and of the fixing device~~ for mold height adjustment includes alternate actuation of the device.

6. (Marked up/ Twice Amended) Mold-closing unit according to claim 1, wherein the unit device for variably fixing the spacing is a clamping device and ~~that this the device~~ for fixing the set-spacing enters positive operational connection with the portion of the guide elements.

7. (Marked up/ Twice Amended) Mold-closing unit according to claim 6, wherein the clamping device has a first collet chuck which is disposed coaxially to the guide element in the region of the portion of the guide elements and can be transferred with the portion of the guide elements into positive operational connection free from play.

8. (Marked up/ Twice Amended) Mold-closing unit according to claim 7, wherein the first collet chuck has a conical region ~~which, in order to release the tension, comes hydraulically into~~ that is in hydraulic operational connection with a cone ring connected to an annular piston and under the force of resilient means, the annular piston being axially moveable to a limited extent along the guide element.

10. (Marked up/ Twice Amended) Mold-closing unit according to claim 6, wherein the clamping device, to form a positive operational connection with the portion of the guide elements has at least one nut which is operationally connected to a thread of said portion.

12. (Marked up/ Twice Amended) Mold-closing unit according to claim 11, wherein the fixing device has a second collet chuck which is disposed coaxially to ~~a one of~~ the guide elements and is fixed on the moveable mold carrier.

13. (Marked up/ Twice Amended) Mold-closing unit according to claim 12, wherein the second collet chuck has a conical region and ~~in that wherein~~ a second hydraulically actuated annular piston with a conical portion effects the clamping with the conical region when hydraulic pressure is applied, ~~the additional annular piston being preferably able to be reset via an additional resilient element.~~

14. (Marked up/ Twice Amended) Mold-closing unit according to claim 3, wherein the guide elements ~~is~~ are ~~a~~ the piston rod of the drive, which rod comes into operational connection with the ~~clamping device~~ for variably fixing via ~~a~~ the portion of the guide elements.

15. (Marked up/ Twice Amended) Mold-closing unit according to claim 1, wherein ~~that~~ there is hinged to the stationary mold carrier a force transmission element, at the opposite end of which, associated with the moveable mold carrier, is disposed the ~~clamping device~~ for variably fixing which co-operates with the portion of the guide elements.